

Windows Media Technologies

**Brooks Cutter
Program Manager
Windows Media
Microsoft Corporation**

What is Streaming Media

- ◆ **Vastly improved end-user experience**
 - **Instant playback or high-quality downloads**
 - **Access to longer, richer content now available**
- ◆ **Greater control for sensitive content**
 - **Secure access to content**
 - **Generate reports on usage**
- ◆ **Multiple data types and environments**
 - **Audio, video, images, scripts, URLs, hot spots**
 - **Internet, Intranet, hard-disk & CD-ROM**
- ◆ **Variety of playback devices**
 - **PCs, Handheld PCs, WebTV, WinCE, set-top boxes**

Digital Media Applications

Radio and Music

- ◆ World wide radio
- ◆ Music videos
- ◆ Downloadable music



News & Entertainment

- ◆ Breaking news
- ◆ Movie trailers
- ◆ Pay-per-view



Communications & Training

- ◆ Seminars
- ◆ Courseware
- ◆ Exec speeches



Grass Roots Broadcasting

- ◆ Internet only radio
- ◆ Local events



What is Windows Media?

- ◆ **Streaming Media solution**
 - **From Modem to Broadband**
 - **Unicast and Multicast Distribution**
- ◆ **Download-and-Play solution**
 - **Unmatched Audio Quality**
 - **Digital Rights Management**
- ◆ **Windows Media Technologies**
 - **Clients, Tools, Services and Partners**
 - **Tight integration with Windows NT, Office 2000, IE5**
 - **Free download off Microsoft.com, Not licensed**

Audio Compression


Best consumer experience

- ◆ **New Microsoft-developed audio codec**
- ◆ **Best audio quality**
 - **Streaming: FM-stereo to modem users**
 - **Download: Same quality as MP3 at 1/2 size**
- ◆ **Highest performance**
 - **20 times faster encode speed than v3.0**
 - **Twice as fast as Real G2 and MP3**
- ◆ **Automatic distribution**
 - **75 KB auto-download to 50 MM WMP users**

Best Audio Quality

for streamed or local playback

Microsoft Audio Codec Demo - Microsoft Internet Explorer



streaming media
internet education corporate entertainment
for everything

**RealNetworks G2 vs.
Microsoft Windows Media**
FM Stereo Quality over a Standard Modem

Pretty Boy Floyd - Shut Up

Raw File	20K G2	20K Windows Media
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Locke - Ayre from Suite no. 2

Raw File	32K G2	32K Windows Media
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[Download and Play Comparison](#)

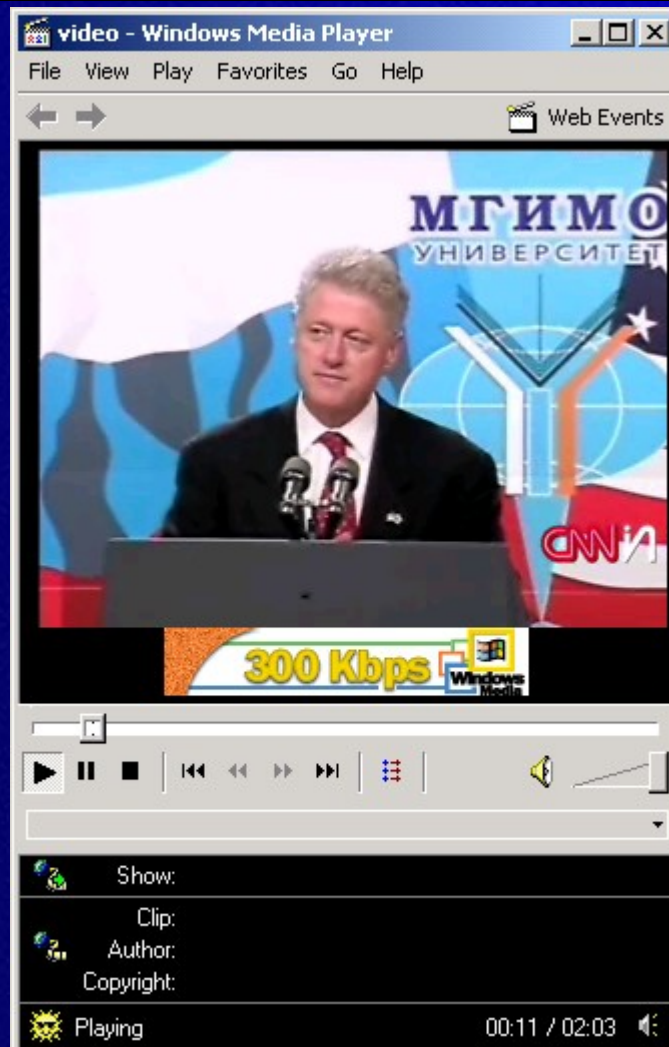
Video Compression

Best consumer experience

- ◆ **Modem to Broadband solution**
 - **Stream from 20 Kbps to 5 Mbps at 30 fps**
 - **Dramatic video improvement at modem rates**
 - **Near-broadcast video at broadband rates**
- ◆ **MPEG-4 video compression**
 - **No need for hardware encoder/decoder**
 - **Optimized for MMX and Pentium-III processors**
- ◆ **Intelligent Streaming**
 - **Up to six bands of video in one ASF file**
 - **Automatic selection of best bandwidth stream**

Highest Quality Streaming Video

from modem to broadband connections



Playing Windows Media

◆ Windows Media Player

- File and Streaming Audio/Video Playback
- Standalone or embed into Web pages with Netscape/Internet Explorer
- 50 Million Players downloaded
Included in IE5, Office 2000, Windows 98 Second Edition and 2000



◆ 3rd Party Audio Players

- Winamp from Nullsoft
- Sonique from MediaScience



◆ 3rd Party Personal Jukebox

- Sonic Foundry Siren
- MusicMatch Jukebox



Windows Media Player

Great content provider features

Title bar
Microsoft branding plus content branding from an ASX metafile

Ad banner bar
Content branding plus click-through URL, both retrieved from an ASX metafile



Animation
Windows Media and OEM branding

Watermark
Aggregator branding retrieved from an ASX metafile

Display bar
Content branding (text and small icons) and click-through URL, retrieved from an ASX metafile

Media Player Distribution

- ◆ **Link to Microsoft.com web site**
- ◆ **Custom Player Kit**
 - **ICPs: Customize Title, Bitmap, Buffering Movie**
 - **Corporate: Customize Buffer, Proxy settings**
 - **microsoft.com/windows/mediaplayer/redist.asp**
- ◆ **Internet Explorer Administration Kit**
 - **Distribute WMP with IE5**
 - **Configure same settings with easy**

Using WMA in Your Applications

(Windows Media Audio)

- ◆ **Enabled through Software Development Kit (Windows Media Audio SDK)**
- ◆ **Can be used to quickly build players/"rippers"**
- ◆ **Only five high-level interfaces**
 - **Manages file I/O, compression, decompression and DRM**
 - **Includes sample player/encoder**
 - **Can incorporate into player/encoder in hours!**
- ◆ **Download the Audio SDK from *www.microsoft.com/windowsmedia***
 - **Contact us for commercial license**

Windows Media Audio From Leading MP3 Vendors

◆ Players

- ◆ Winamp
(www.winamp.com)

- ◆ Sonique
(www.sonique.com)

◆ Personal Jukeboxes

- Sonic Foundry Siren
www.sonicfoundry.com

- MusicMatch Jukebox
www.musicmatch.com

- RioPort Audio Manager
www.rioport.com

- Many more available at...
<http://www.microsoft.com/windowsmedia/software/j>



WMA in Professional Applications

◆ Audio Editing & Batch Compression

➤ Sonic Foundry CD-Architect

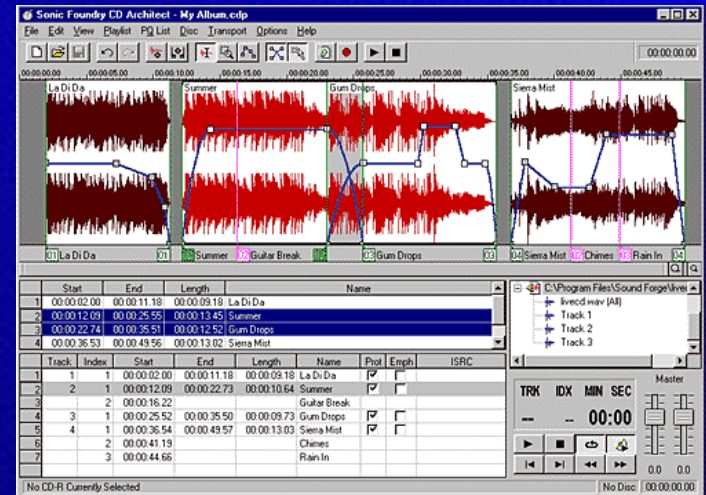
www.sonicfoundry.com

➤ CakeWalk Pro Audio 8

www.cakewalk.com

➤ MixMan Studio

www.mixman.com



Creating Content with Windows Media 4.0

- ◆ **Comprehensive suite of tools included:**

- Windows Media Encoder
- Windows Media On-Demand Producer
- Windows Media Media Cleaner EZ
- PowerPoint 2000
- Windows Media Author



- ◆ **Integral support for:**

- Advanced audio and video codecs
- Intelligent streaming
- Synchronized Multimedia



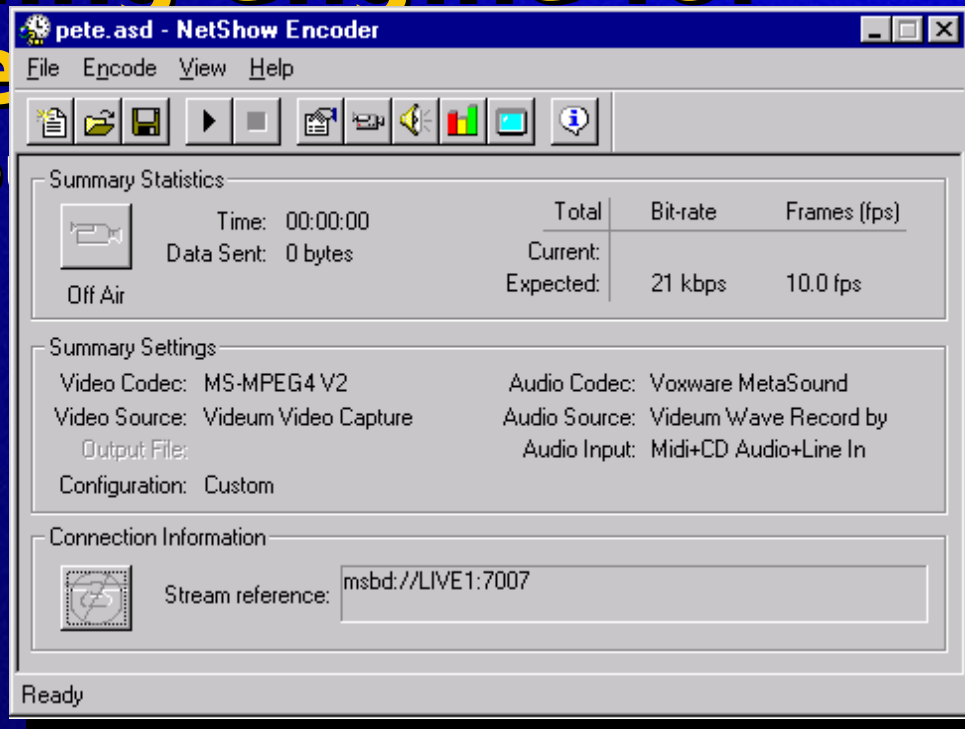
- ◆ **Great third party tools**



Windows Media Encoder:

The core encoding engine for

- ◆ **User-Friendly UI**
- ◆ **Template-based output**
- ◆ **New controls for scaled encoding**
- ◆ **Author and store live content**
 - **Mix with scripts and urls on the fly**
- ◆ **Source from AVI and WAV and MP3 files in addition to live**



Encoder Configuration

- ◆ **High-end Windows Media Encoder**
 - **1 or 2 Intel Pentium™ II or III processors**
 - **64 to 128MB Memory (RAM)**
 - **100mb Fast Ethernet/Switched 10mb (live)**
 - **SCSI disks preferred**
 - **Video capture card (MMAC Osprey-100 \$200)**
 - **SB16-compatible Sound Card (SoundBlaster Live or multi-channel card)**
- ◆ **Windows NT 4.0 Workstation preferred**

Windows Media On-Demand Producer



- ◆ **Easy ONE STEP encoding of audio and video to Windows Media ASF Format**
- ◆ **New Paradigm for Multimedia Authoring**
- ◆ **Excellent Video Controls and Audio enhancements**
- ◆ **Batch Encoding supported**

Demonstration

**Windows Media On-Demand
Producer**

Office 2000 Integration

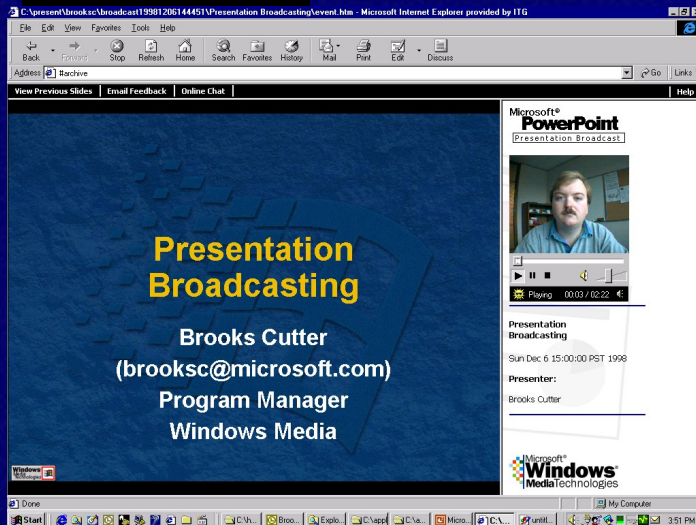
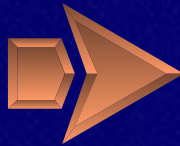
PowerPoint Presentation

Broadcasting

- ◆ **Integrates Windows Media with Office 2000 for PowerPoint 2000 Presentations**
- ◆ **Wizard makes it easy to configure PowerPoint**
- ◆ **PowerPoint will automatically configure Server for Unicast+Multicast**
- ◆ **Audience interacts with Email or Chat**
- ◆ **Only the Presenter needs PowerPoint 2000**
- ◆ **Audience uses Media Player + Web Browser**
- ◆ **Available today with Office 2000**
<http://www.microsoft.com/office/>

Presentation Broadcasting

PowerPoint 2000 + Windows Media
Encoder + Services



Unicast or
Multicast



End User

Demonstration

Presentation Broadcasting

Distributing Content with Windows Media 4.0

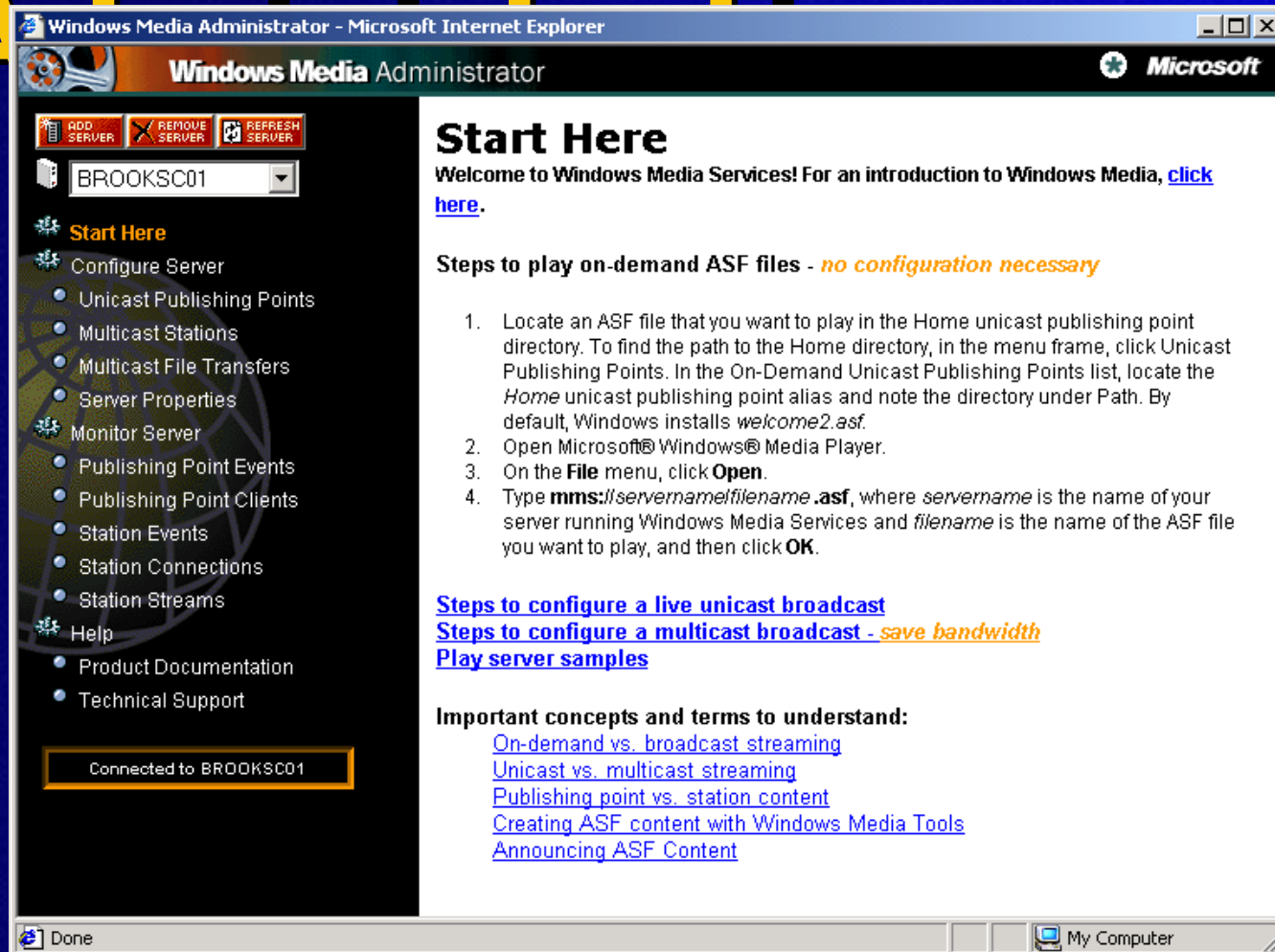
- ◆ **Windows Media Services for Streaming**
 - Scalable, manageable, industrial strength server
 - Scales to 4000 concurrent users
 - Electronic Commerce (PPV) and other advanced applications
- ◆ **Web Server for Download-and-Play**
 - Use Windows NT/IIS or Any Web Server
- ◆ **Windows Media rights manager for Digital Rights Management**

Server Configuration

- ◆ **High-end Windows Media Server**
(for thousands of concurrent connections)
 - **1-2 Intel Pentium™ II or III processors**
 - **256-512mb Memory**
 - **100mb Fast Ethernet card**
 - **Hardware RAID, striped disks**
 - **Use RAID 0 w/o parity for performance**
 - **Use disks with high data transfer rate**

Server

A



Log File Reporting

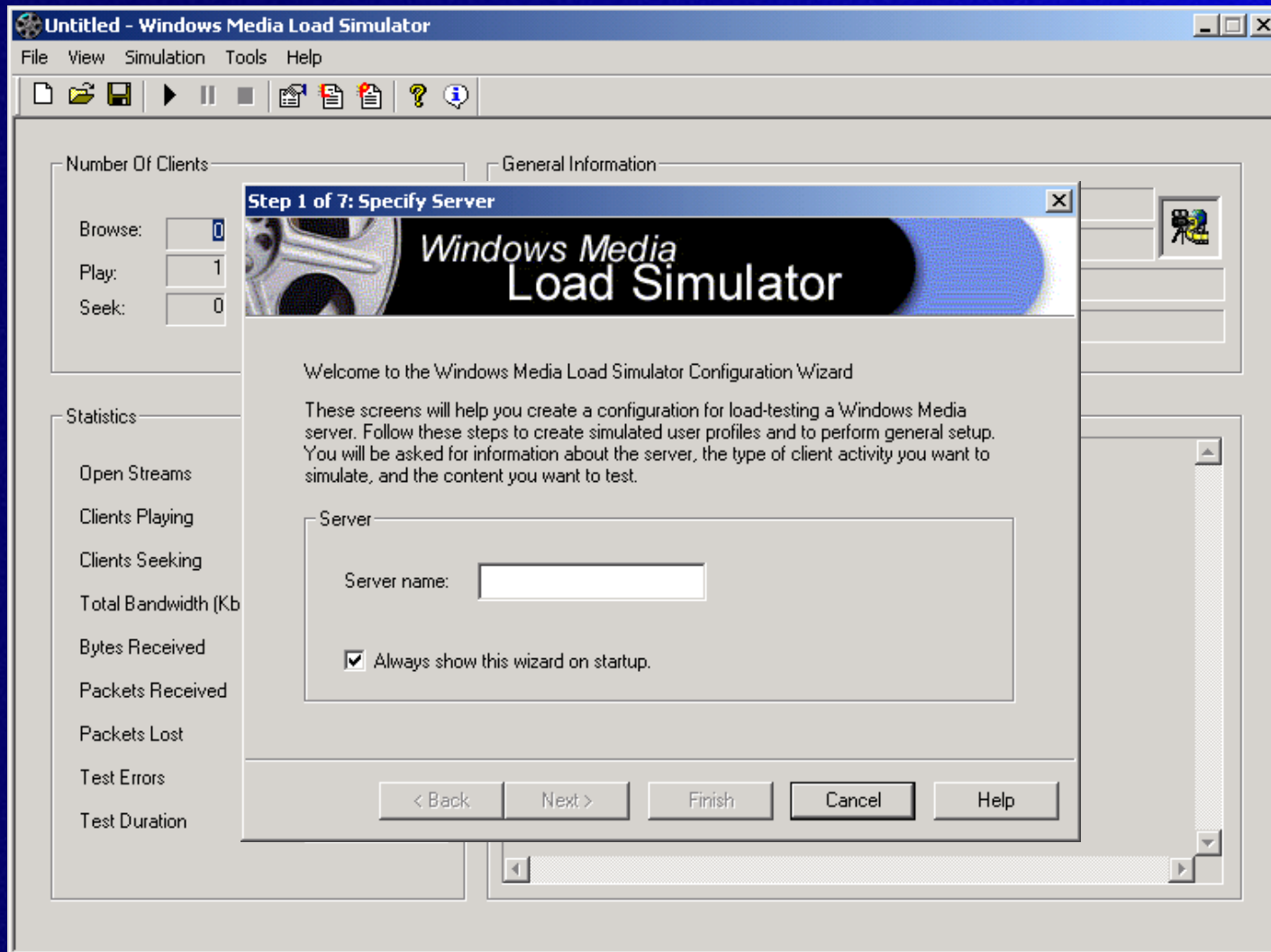
- ◆ **Logging is disabled by default - Enable through Server Properties**
- ◆ **Logfiles are in W3C Format**
- ◆ **Logfile Reporting options available:**
 - **WSH Script (Free) - Email for access**
 - **Usage Analysis in MS Site Server 3.0**
 - **MarketWave's HitList**
 - **WebTrends Log Analysis**

Load Testing WMS

Windows Media Load Simulator

- ◆ **Use to load test or stress test a Windows Media Server**
- ◆ **Monitors server for common problems**
- ◆ **Log results to CSV for analysis**
- ◆ **Test Different client types:**
 - **Browse, Play, Seek, Open/Close, Random, and Single Bit Rate (v4 content)**
- ◆ **Available in final release of WMT v4**

Demonstration



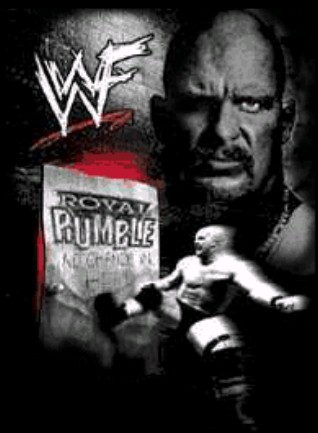
Commerce Integration

- ◆ **Site Server Membership for tracking user information & passwords**
- ◆ **Site Server Commerce for business model & transactions**
- ◆ **PPV Solution makes it easy to Commerce enable your content**
- ◆ **Digital Rights Management for generating revenue, preventing piracy**

Pay Per View Solutions


for augmenting site revenue

Backstage @ WrestleMania - Microsoft Internet Explorer



The Rock takes on Mankind in the Royal Rumble Pay Per View Event. FEEL the action. Also on this ticket: Shamrock, the Big Boss Man, Gangrel and the Brood, and Stone Cold Steve Austin vs. Mr. McMahon.

WWF Pay Per View - Microsoft Internet Explorer


PAY PER VIEW

Which event are you registering to watch?

☒ Royal Rumble : \$5.95

Select one of the choices above, and click **Next**.

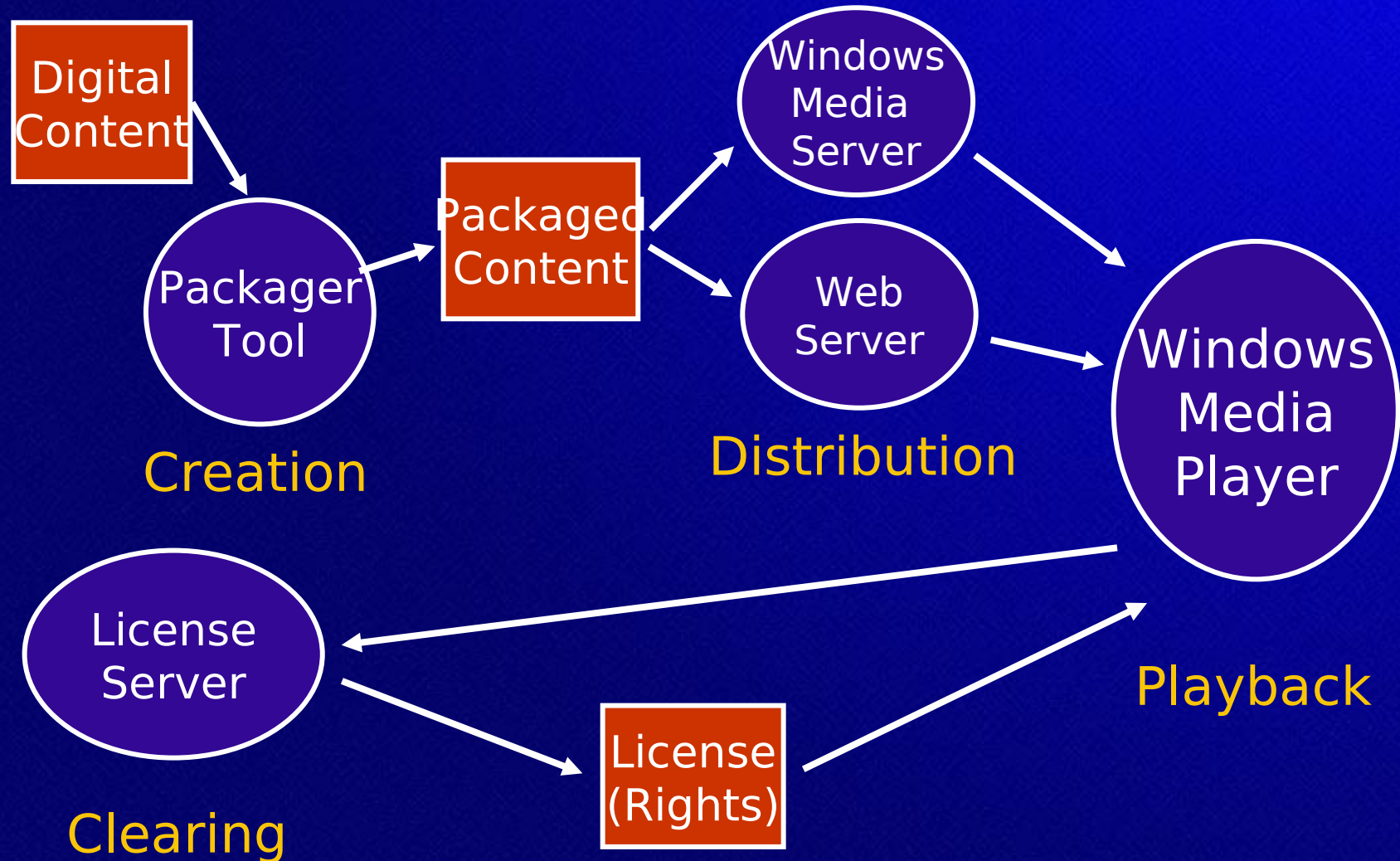
Quit Next >

Windows Media Rights Manager

- ◆ **(DRM, Digital Rights Management)**
 - ◆ **Allows copyright owners to encrypt content**
 - **Users must acquire “license” to play**
 - **Content cannot be easily emailed, transferred, or copied with associated license**
- ◆ **Enables artists, publishers and distributors to collect information and/or money**
- ◆ **Designed to vastly reduce digital music piracy**
- ◆ **Incorporated in Windows Media Player (WMP)**

Rights Manager

Process Flow



Rights Management

for protecting & cataloging content

LAUNCH.com Digital Download - Microsoft Internet Explorer



Digital Download

Welcome to the new LAUNCH.com Digital Download area. All of these free full-length songs are LAUNCH.com world exclusives from a wide variety of artists and genres. Enjoy!

Featured Artists Windows Media player required



Willie Nelson
Rainy Day Blues
[Preview](#) or [Download](#)



Keiko Matsui
Full Moon and the Shrine
[Preview](#) or [Download](#)

brought to you in part by



security.
rights.
reciprocal
Driving the Content Economy

All Artists Windows Media player required

Bobby Fuller Four	I Fought The Law	Preview or Download
Boston	Someone	Preview or Download
Boston	Turn It Off	Preview or Download
Buck-O-Nine	Swimming In Sand	Preview or Download
Buckcherry	Dead again	Preview or Download
Chan Romero	Hippy Hippy Shake	Preview or Download
Dave Hollister	I'm Sorry	Preview or Download
Eels	3 Speed	Preview or Download
Elliott Smith	Independence Day	Preview or Download
Floraline	Morning Side	Preview or Download
Gardener	Tamed	Preview or Download
Guided By Voices	Hold On Hope	Preview or Download
Hate Dept.	Release It	Preview or Download
Liquor Giants	Hippy Hippy Shake (New Version)	Preview or Download
Lori Carson	Treasure	Preview or Download
MC Lyte	Maindish	Preview or Download
Murder City Devils	I Want A lot Now	Preview or Download
Peter Himmelman	Forgiveness Shining	Preview or Download
Peter Himmelman	Put Her Behind Me	Preview or Download
Reverend Horton Heat	400 Bucks	Preview or Download

Additional features from LAUNCH.com

Personalized Music
news, artist interviews, concerts, music videos

Music Community
member pages, chats, music recommendations

BETA



Get
Windows
Media Player

HTML+TIME

- ◆ **Leverage investment in HTML**
- ◆ **XML based animation of HTML and media elements as part of the page description**
 - **One clock for the whole page**
 - **Also presents an object model**
 - **Synchronizes streaming media with other elements in the page**
- ◆ **Enables round trip of HTML pages with animations between authoring applications**
- ◆ **Available today with Internet Explorer 5.0 and Vizact 2000**

Demonstration

HTML+Time Demos

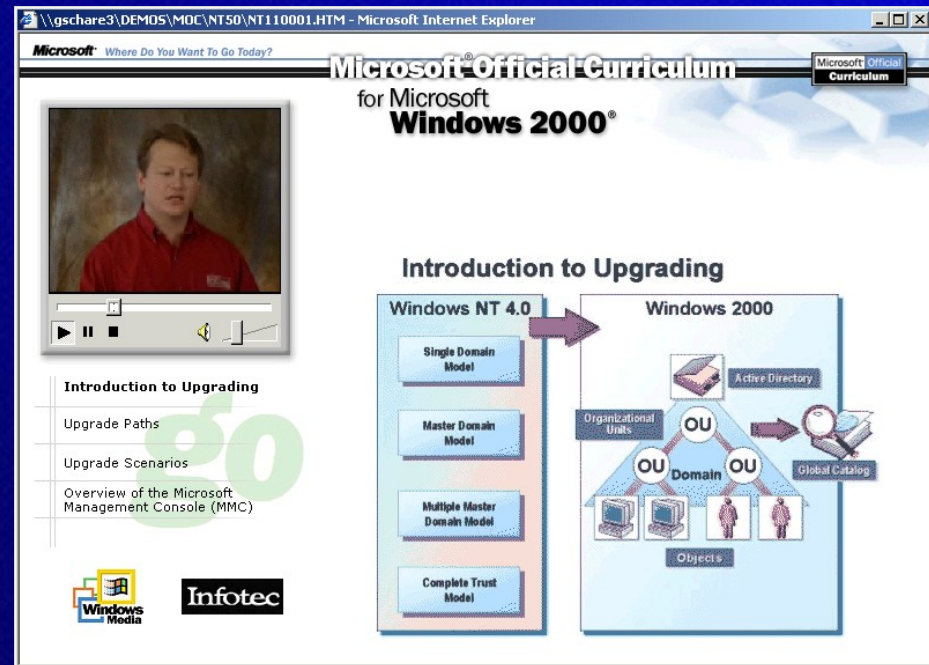
Turnkey Corporate Training *Maximum Business ROI*

◆ Windows Media Training Server

- 100 hours of training sessions
- Windows NT and BackOffice
- Plays in browser
- Under \$4K from Compaq resellers

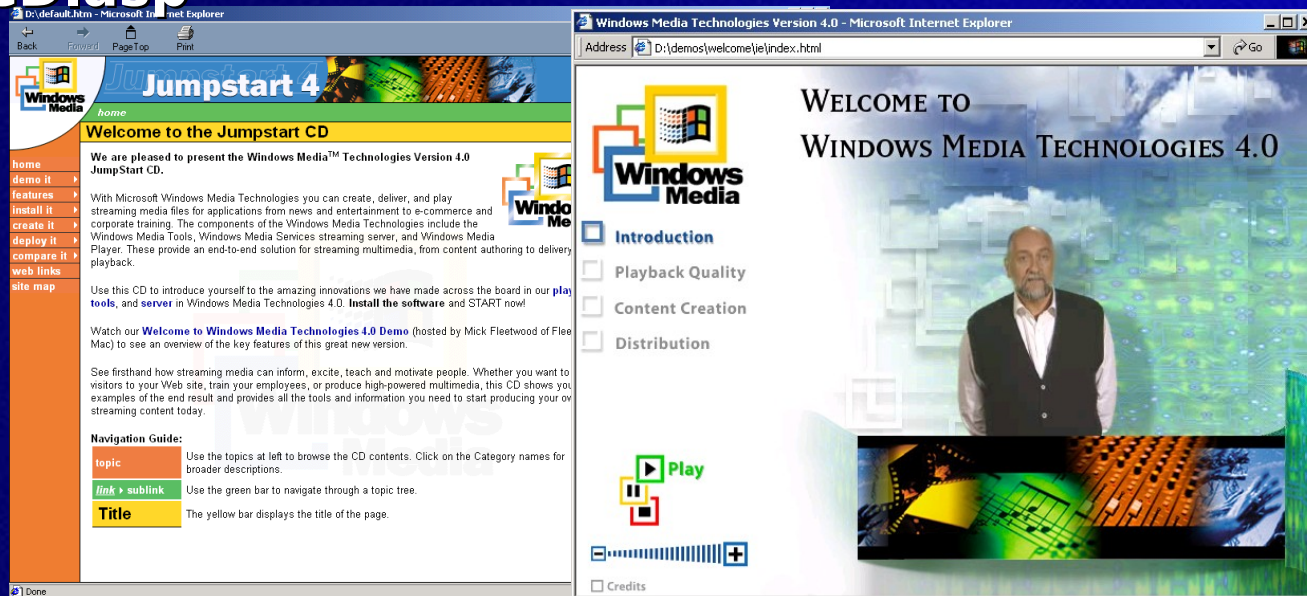
<http://microsoft.com/windows/windowsmedia/tools/trainserv.asp>

- Information at



Jumpstart CD

- ◆ Contains Demos, White papers, Software and Best Practices
- ◆ Order Online from microsoft.com at microsoft.com/windowsmedia/download/JumpStartCD.asp



Jumpstart CD Demo

The image shows a screenshot of a Microsoft Internet Explorer browser window displaying the Jumpstart CD Demo website. The browser's address bar shows the URL `D:\default.htm - Microsoft Internet Explorer`. The website has a blue header with the "Jumpstart 4" logo and a yellow navigation bar. A sidebar on the left contains a list of links: home, demo it, features, install it, create it, deploy it, compare it, web links, and site map. The main content area is titled "Welcome to the Jumpstart CD" and includes a section for "Windows Media Technologies Version 4.0". It describes the capabilities of the technologies, such as creating, delivering, and playing streaming media files. A "Navigation Guide" section explains how to use the site's navigation features, including a "topic" bar, a "link > sublink" bar, and a "Title" bar. The bottom of the page features a "Play" button and a "Credits" link.

Jumpstart 4

home

Welcome to the Jumpstart CD

We are pleased to present the Windows Media™ Technologies Version 4.0 JumpStart CD.

On this CD:
Demos
Software

With Microsoft Windows Media Technologies you can create, deliver, and play streaming media files for applications from news and entertainment to e-commerce corporate training. The components of the Windows Media Technologies include Windows Media Tools, Windows Media Services streaming server, and Windows Media Player. These provide an end-to-end solution for streaming multimedia, from creation to playback.

Use this CD to introduce yourself to the amazing innovations we have made at Microsoft, and **server** in Windows Media Technologies 4.0. **Install the software**

Watch our **Welcome to Windows Media Technologies 4.0 Demo** (hosted on Mac) to see an overview of the key features of this great new version.

See firsthand how streaming media can inform, excite, teach and motivate visitors to your Web site, train your employees, or produce high-powered multimedia examples of the end result and provides all the tools and information you need to create streaming content today.

Navigation Guide:

topic Use the topics at left to browse the CD contents. Click on the topic for broader descriptions.

link > sublink Use the green bar to navigate through a topic tree.

Title The yellow bar displays the title of the page.

Windows Media Technologies Version 4.0 - Microsoft Internet Explorer

Address `D:\demos\welcome\je\index.html`

WELCOME TO WINDOWS MEDIA TECHNOLOGIES 4.0

Windows Media

☒ Introduction

☐ Playback Quality

☐ Content Creation

☐ Distribution

Play

☐ Credits

Windows Media

Summary

- ◆ **Best end user experience**
 - **Best audio and video quality**
 - **Multiple players available**
- ◆ **Easy to create content**
 - **Comprehensive tool suite**
 - **Wide variety of 3rd party tools**
- ◆ **Choice of server solutions**
 - **Digital rights management**
 - **Commerce integration with PPV Wizard**

Software Availability

- ◆ **Windows Media 4.0 released on Aug 17th**
 - **Download all software from**
<http://www.microsoft.com/windowsmedia>
- ◆ **3rd Party WMA Players & Jukeboxes**
 - **<http://www.microsoft.com/windowsmedia/software/>**
- ◆ **Windows Media Audio content available from**
 - **<http://www.windowsmedia.com>**

Where do you want to go **today?**

Microsoft®